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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,358	07/27/2001	David B. Loeper	FINANCE 3	9160
7590	01/22/2009		EXAMINER	
John H. Thomas, P.C. 536 Granite Avenue Richmond, VA 23226			CAMPEN, KELLY SCAGGS	
			ART UNIT	PAPER NUMBER
			3691	
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			01/22/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/916,358	LOEPPER, DAVID B.	
	<b>Examiner</b>	<b>Art Unit</b>	
	KELLY CAMPEN	3691	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 07 October 2008.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-26 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-26 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/22/2008.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

*The following is in response to the RCE (and included amendments and arguments) filed 10/07/2008. Claims 1-26 are pending. The election by original presentation presented in the prior final office action is being withdrawn and claims 20-26 will be examined.*

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/7/2008 has been entered.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-13,20-22,25-26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-7,20,25-26 recite a process comprising the steps calculating, updating, calculating, updating and repeating. Based on Supreme Court precedent, a proper process must be tied to another statutory class or transform underlying subject matter to a different state or thing

(*Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780,787-88 (1876)).

Since neither of these requirements is met by the claim, the method is not considered a patent eligible process under 35 U.S.C. 101. To qualify as a statutory process, the claim should positively recite the other statutory class to which it is tied, for example by identifying the apparatus that accomplished the method steps or positively reciting the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.

Claims 8-13, 21-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Nonfunctional descriptive material that does not constitute a statutory process, machine, manufacture, or composition of matter are nonstatutory under 35 U.S.C. 101. Certain types of descriptive material, such as music, literature, art, photographs, and mere arrangements or compilations of facts or data, without any functional interrelationship is not a process, machine, manufacture, or composition of matter. Nonfunctional descriptive material may be claimed in combination with other functional descriptive multi-media material on a computer-readable medium to provide the necessary functional and structural interrelationship to satisfy the requirements of 35 U.S.C. 101.

Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional

interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Similarly, computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components or statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,021,397 Jones et al in view of Investing for Retirement: Using the Past to Model the Future, hereinafter, Bierwirth.

Specifically as to Claim 1, Jones et al. disclose the invention substantially as claimed as in a method for evaluating financial plans (Abstract) the steps of: receiving from a user financial plan information, comprising a predetermined initial value of an investment (Col. 18, lines 27-29), updating the changed investment value based on one or more contribution or withdrawal amounts corresponding to the length of the time interval in accordance with the financial plan to obtain a further changed investment value;) and a plan duration (Col. 17, line 36-43 and Col. 18, lines 27-28) calculating the change in a predetermined initial value of an investment over a time interval based on changes in value over a randomly-selected first historical time interval to obtain a changed investment value; (presenting calculated investment values using results of said steps) (Col. 18, line 21 and Col. 18, lines 43-48, Col. 22, lines 56-60, Col. 20, lines 7-30). *Jones* does not specifically disclose the detail of simulating historical performance of a portfolio to analyze financial plans.

Bierwirth discloses calculating the change in a predetermined initial value of an investment over a time interval based on changes in value over a randomly-selected first historical time interval to obtain a changed investment value; calculating the change in the further changed investment value over a second time interval based on changes over a second historical time interval, said second historical time interval being randomly-selected independent of said first historical time interval, to obtain a second changed investment value (Page 3, lines 24-26); updating the second changed investment value based on a selected contribution or withdrawal amount corresponding to the length of the second time interval in accordance with the financial plan (Page 3, lines 35-38); repeating said steps of calculating and updating with respect to a third historical time

interval and a fourth historical time interval, respectively, said third historical time interval and said fourth historical time interval being selected randomly (Page 3, lines 29-32).

It would have been obvious to one of ordinary skill in the art to include in the financial system of Jones et al. the performance simulation and calculations as taught by Bierwirth since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Specifically as to claims 2, 9 and 15, Jones et al disclose the presentation of results at Col. 4, lines 24-34 and Col. 11, lines 7-10.

Specifically as to claims 3, 10 and 16, Jones disclose multiple asset categories and distinct historical data at Fig. 4 and Col. 12, line 54 to Col. 13, line 41.

Specifically as to claims 4, 11 and 17, comparison of results of calculation to a goal would be obvious to assess performance of the modeled financial plan.

Specifically as to claims 5, 12 and 18, Jones discloses adjustment for taxes at Fig. 3 and Col. 8, lines 1-13

Specifically as to claims 6, 13 and 19, Jones et al teach the entry of initial investment values and allocation to asset categories at Col. 5, line 50 to Col. 7, line 10.

Specifically as to claims 7, see the discussion of plural runs in the rejection of Claim 1.

Specifically as to claims 8, 14, 25, see the discussion of Claim 1; Jones et al. disclose system and storage media at Col. 4, line 60 to Col. 5, line 49.

Specifically as to claims 20 and 21, updating the changed investment value based on one or more withdrawal amounts corresponding to an anticipated large expense (see Fig. 4 and Col. 12, line 54 to Col. 13, line 41).

Specifically as to claim 22, means for repeatedly calculating and updating for a plurality of randomly-selected historical intervals until a total of the randomly-selected historical intervals equals a total financial plan period (see Fig. 4 and Col. 12, line 54 to Col. 13, line 41).

Specifically as to claim 23, updating the changed investment value based on one or more withdrawal amounts corresponding to an anticipated large expense (see Col. 5, line 50 to Col. 7, line 10).

Specifically as to claim 24, repeat said steps of calculating and updating with respect to a randomly-selected third historical time interval and a randomly-selected fourth historical time interval, respectively (see Fig. 4 and Col. 12, line 54 to Col. 13, line 41).

Specifically as to claim 26, the change in the initial value is calculated in part based on one or more predefined contributions or withdrawals occurring during the portion of the plan interval corresponding to the first historical time interval, and wherein the change in each interim changed investment value is calculated in part based on one or more predefined contributions or withdrawals occurring during the portion of the plan interval corresponding to each respective historical time interval (see Fig. 4 and Col. 12, line 54 to Col. 13, line 41).

***Examiner's Note***

Examiner has cited particular columns and line numbers in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are

representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

***Response to Amendment***

The Declaration under 37 CFR 1.132 filed 10/07/2008 is insufficient to overcome the rejection of claims 1-19 based upon 35 USC 103 as set forth in the last Office action because: facts presented are not germane to the rejection at issue. See MPEP § 716. In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

***Response to Arguments***

Applicant's arguments filed 10/07/08 have been fully considered but they are not persuasive. Specifically, the obviousness rejection does not rely on the Examiner's expert testimony as indicated in the rejection based on Jones et al. in view of Bierwirth. In addition, it is noted that no Official Notice was given in the prior office action. As such, Examiner notes applicant's Declaration and evidence to ordinary skill in the art, but the arguments are moot as no Official Notice was relied upon in the rejection as set in the above rejection the pending claims (see above).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, *Bierwirth* describes problems with unrealistic assumptions of traditional financial plans at the last paragraph of page 1 and describes the solution to this problem as using the historical investment experience of others to produce more realistic and useful retirement modeling. See particularly the Conclusion at page 6 of *Bierwirth*. Additionally, an invention is likely obvious if a person of ordinary skill in the art can implement a predictable variation, and would see the benefit of doing so.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on

combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that neither reference discloses or teaches a large number of possible plan scenarios to be analyzed, Examiner disagrees. In the above rejection, the Examiner addresses this limitation in the modeling reference. In addition, applicant claims that method in Bierwirth would not include a statistically significant result, Examiner disagrees as the system in Bierwirth is capable of performing this function.

The Supreme Court's decision in *KSR International Co. v. Teleflex Inc. (KSR)* reaffirmed that a determination of obviousness under 35 U.S.C. § 103 rests on the factual inquiries set forth in *Graham v. John Deere Co. (Graham)*:

“Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. . . .”

... [T]he [Graham] factors continue to define the inquiry that controls.

*KSR*, 550 U.S. \_\_\_, 82 USPQ2d 1385, 1391 (2007), quoting *Graham*, 383 U.S. 1, 17-18 (1966).

In accordance with statute and case law, the MPEP instructs examiners that “[t]he question of obviousness must be resolved on the basis of [the Graham] factual determinations.” MPEP 2141(II). With regard to the issue of ordinary skill, MPEP 2141(II) continues: “In certain circumstances, it may also be important to include explicit findings as to how a person of ordinary skill would have understood prior art teachings, or what a person of ordinary skill would have known or could have done.” The Manual also states at MPEP 2141(II)(C), “Any

obviousness rejection should include, either explicitly or implicitly in view of the prior art applied, an indication of the level of ordinary skill.”

The question regarding explicit statements of the level of ordinary skill is addressed at MPEP 2141.03(II):

**SPECIFYING A PARTICULAR LEVEL OF SKILL IS NOT NECESSARY  
WHERE THE PRIOR ART ITSELF REFLECTS AN APPROPRIATE LEVEL**

If the only facts of record pertaining to the level of skill in the art are found within the prior art of record, the court has held that an invention may be held to have been obvious without a specific finding of a particular level of skill where the prior art itself reflects an appropriate level. *Chore-Time Equip., Inc. v. Cumberland Corp.*, 713 F.2d 774, 218 USPQ 673 (Fed. Cir. 1983). See also *Okajima v. Bourdeau*, 261 F.3d 1350, 1355, 59 USPQ2d 1795, 1797 (Fed. Cir. 2001).

Thus, it is the position of the Office that an examiner is only required to make a statement on the record as to the level of ordinary skill when the level of ordinary skill is at issue in the case and is not adequately reflected in the record. Evidence of the level of ordinary skill will most often be found in the prior art of record, but other documents that are part of the application file may also be relevant. This position is adequately supported in case law. “We hold only that an invention may be held to have been either obvious (or nonobvious) without a specific finding of a particular level of skill or the reception of expert testimony on the level of skill where, as here, the prior art itself reflects an appropriate level and a need for such expert testimony has not been shown.” *Chore-Time Equip., Inc. v. Cumberland Corp.*, 713 F.2d 774, 779 n.2 (Fed. Cir. 1983). “Although the Board did not make a specific finding on skill level, it did conclude that the level of ordinary skill in the art of asbestos removal and contamination control was best determined by

appeal to the references of record . . . .” In re GPAC Inc., 57 F.3d 1573, 1579 (Fed. Cir. 1995). “Judge Pfaelzer discussed various factors involved in determining ordinary skill in the art, but did not specify a particular level applicable here. Nor need she have done so, for the parties are in agreement that their respective chemical expert witnesses with extensive backgrounds in sulfur chemistry are persons of ordinary skill in the art.” Envtl. Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 697 (Fed. Cir. 1983). A recent non-precedential case also supports the position of the Office: “[I]t is well-established that in certain situations, such as with relatively simple and understandable technology, a specific finding on the level of ordinary skill in the art is unnecessary because the prior art itself is representative of the relevant level of ordinary skill.”

Printguard, Inc. v. Anti-Marking Systems, Inc., 2008 WL 245415, at \*11 (D. Mass. 2008) (citing Chore-Time at 779 & n.2).

The Board of Patent Appeals and Interferences (Board) has also taken the position that the level of ordinary skill can be implicit in the record. Ex parte Jud, 85 USPQ2d 1280, 2006 WL 4080053 (Bd. Pat. App. & Interf. 2007) is an expanded panel Decision on Request for Rehearing which has been designated as informative; it is available on the Board’s web site at <http://www.uspto.gov/web/offices/dcom/bpai/its/rh061061.pdf>. In that case, the expanded panel declined to overturn the original panel’s affirmance of the examiner’s obviousness rejection. The appellant had argued “that the [original panel of the] Board misapprehended or overlooked the requirement that a determination of the level of ordinary skill in the art must be made in the record as part of an obviousness determination.” Id. at 1281, 2006 WL 4080053 at \*1. The Board did not agree. First, the Board explained that in general, evidence for the level of ordinary skill might be found in the applicant’s disclosure, in the prior art references of record in the case,

and in declarations or other testimony. *Id.* at 1282-83, 2006 WL 4080053 at \*1. Commenting further about the role of the references, the Board stated:

Prior art references are cited precisely because they show what those skilled in the art would have known and been able to do before the effective filing date for the application. When used in combination, prior art references may even reveal a continuum of knowledge and ability greater than the sum of their separate, express disclosures.

*Id.* at 1282-83, 2006 WL 4080053 at \*1. Then, the Board addressed the particulars of the case before it, and stated that “[b]y outlining what one would know from references, the examiner met her burden to establish the skill level in the way it is typically met during examination.” *Id.* at 1284, 2006 WL 4080053 at \*5. Thus, it is clear that the Board recognizes that examiners may continue to address the level of ordinary skill implicitly by an appropriate assessment of the prior art.

The Manual provides guidance for examiners who are faced with the need to resolve the level of ordinary skill in a given art.

Factors that may be considered in determining the level of ordinary skill in the art may include: (1) “type of problems encountered in the art;” (2) “prior art solutions to those problems;” (3) “rapidity with which innovations are made;” (4) “sophistication of the technology; and” (5) “educational level of active workers in the field. In a given case, every factor may not be present, and one or more factors may predominate.”

MPEP 2141(II)(C) (internal citations omitted). The Supreme Court in *KSR* has also reminded examiners that they may take into account “the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR* at \_\_\_, 82 USPQ2d at 1396. The Federal Circuit has confirmed that examiners should be “informed by their scientific knowledge, as to the

meaning of prior art references to persons of ordinary skill in the art.” In re Berg, 320 F.3d 1310, 1315 (Fed. Cir. 2003).

Finally, the Supreme Court’s statement in Graham regarding ordinary skill should be recalled: “Under § 103, . . . the level of ordinary skill in the pertinent art [is to be] resolved.” Graham at 17. What Graham requires is that the level of ordinary skill be resolved, not that an examiner spend time reiterating what is already clear on the record. If the level of ordinary skill is clear in view of the record, it has been resolved and the mandate of Graham is met. An examiner is not required to make findings as to the level of ordinary skill when the level of ordinary skill is not at issue in the case.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Loeper discloses a system for auditing financial plans. Gullen et al. disclose dynamic portfolio benchmarking. Li discloses automated investment chart pattern search systems for technical analysis. Bettis et al. disclose system s for evaluating and disseminating investor performance information.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KELLY CAMPEN whose telephone number is (571)272-6740. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kalinowski can be reached on (571) 272-6771. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kelly Campen  
Primary Examiner  
Art Unit 3691

/Kelly Campen/  
Primary Examiner, Art Unit 3691